



Robotic palletisers are using their head

Trends

Manufacturers of consumer goods are hard pressed and vie for the attention of purchasers using attractive packages. These packages are available in various sizes and are often changed and created to suit the end users needs or tastes. A diverse and large number of products at the output from production lines can mean a greater challenge for the packaging and handling equipment, which must be able to cope with it.

MANEX & Co a.s. - a specialist designer and manufacturer of material handling and packaging lines can meet these challenges

and offer its highly efficient and versatile solutions to solve our customers problems. For applications having medium output speeds and where several different types of products from multiple lines are delivered, we recommend a robotic solution. Cleverly designed systems using one industrial robot can do the work of several specialized machines on a much smaller more cost effective footprint.

MANEX robotic palletising systems use industrial robots from leading manufacturers (ABB, Kawasaki, KUKA) and complement it with special multi-purpose heads of our own design. These heads allow not only picking up the product and placing it onto pallets, but also insertion of layer pads and handling of empty pallets. This means there is no need for a layer pad inserter and a pallet magazine with conveyor. For gripping sealed boxes and layer pads the head is equipped with suction cups. For products of irregular shapes such



as PET-bottle-multipacks it uses a gripping mechanism. In addition special gripping arms allow the transfer of different types and sizes of pallets.

The range of application of these robotic systems is very wide. MANEX's role is to design a specific application and deliver complete lines including conveyors and wrapping machines. 'No obligation' design meetings held with MANEX early in the project cycle can help a customer decide which system is most suitable for their application and choose the most cost effective solution.



MANEX in 2009

Commentary

Year 2009 is already in full swing. Let us wish you good luck and lots of success in this year. What do we expect in MANEX & Co a.s. for this year? Above all a lot of hard work and involvement with interesting projects.

Our plan for 2009 will focus on improving our efficiency, improving and expanding our customer service and optimizing internal processes but does not plan on significant short term growth due to the world economic situation. More than ever we are

conscious of our mission, which is to help our customers make their production processes more cost effective.

We want to continue to be a reliable partner who will take care of the packaging and handling and allow manufacturers to focus their energy on the product itself. In 2009 we will strengthen our after sales services and our sales managers will endeavour to work even more closely with our Customers. For existing Customers our primary objective remains one of

long-term cooperation and strengthening our position as your preferred supplier and for potential Customers we hope our proposals bring us together in partnership to solve your packaging and handling issues.

Looking forward to working with you on future projects.

With kind regards

Dipl.-Ing. Radoslav Kovář
Chairman of the Board

Palletisation of boxes from 2 lines

Project

One of the new projects that the company MANEX & Co. realized at the beginning of 2009 is a box palletising system for an Austrian manufacturer of plumbing material.

Project specification required palletising of several different types of boxes from two production lines, laying them on EURO or ISO pallets (EURO 1200 x 800 mm or ISO 1200 x 1000 mm), then wrapping the full pallet in stretch-wrap film and finally conveying it to an unloading ramp. A Kawasaki industrial robot was used as a palletising unit together with a special gripping head designed by

MANEX. This multi-functional head enables transferring of boxes from the infeed conveyor onto the pallet (using suction cups) and also gripping of empty pallets from the stack on the floor and placing them on the pallet conveyor at the palletising position (using gripping hooks). You can see two pictures of this special head on the title page of this newsletter.

The palletising unit itself is also complemented by a transport system for boxes with a turning device, transport system for full pallets and an automatic wrapping machine.



Palletising robot with 2 deposition places

Output of the palletiser is 360 boxes per hour.

Turning device for boxes integrated into conveyor

Innovation

Following requirements from our customers, we have developed a new practical solution for multi-axis turning of boxes on the conveyor. Using a system of flaps, driven inclined belt and an active horizontal bar, it is now

possible to turn boxes independently in all 3 axes. This all within only 1.4 m long conveyor segment.

The rotation is controlled via the control panel. According to option, the active railing is adjusted automatically and cartons are turned along the selected axis which results in precise orientation. This is often important for sticking labels or barcodes on one particular side of goods. The device finds application in group packages wrapped in foil, where it is necessary to label it on the smooth side only. All rotary movements are derived from a single electric motor, which also drives the belt conveyor. This



conveyor creates the necessary gaps between individual cartons before they enter the turning device.

The new device has proved to be very functional and also advantageous for the customer in terms of low operating costs.

More than 15 years in service

References

Since its foundation back in 1992, the company MANEX has delivered more than 170 palletising and depalletising machines, tens of kilometres of transport systems for pallets and products and hundreds of additional handling equipment items to our customers all around the world.

We decided to find out how some of our oldest machines had fared in service. The result is that most of them are still in operation and the oldest one has been working continuously for almost 17 years! Come and look with us at five randomly selected.

1. Depalletising for crates for STOCK Plzeň a.s.

Made in 1992 as the first MANEX machine.

Type: Single-column depalletiser with gripping head (D 540 series), max. throughput: 180 layers/hour.

Present location: Drinks Union a.s., Krásné Březno brewery, Ústí nad Labem, CZ.



2. Combi-palletising for kegs for the Regent brewery

Made in 1994.

Type: Single-column unit with gripping head (K540 series). Combi-palletisation means a machine capable of both palletising and depalletising. Max. throughput: 250 kegs per hour.

Present location: Bohemia Regent, a.s., Třeboň, CZ.

3. Depalletising for new bottles for STOCK Plzeň a.s.

Made in 1994.



Type: Two single-column depalletisers for bottles with clamping head (D 570 series).

Max. throughput: 150 layers/hour.

Present location: Stock Plzeň a.s., Plzeň Božkov, CZ.

4. Combi-palletising for kegs for the Samson brewery

Made in 1994.

Type: Single-column unit with gripping head (K540 series). Max. throughput: 250 kegs per hour.

Present location: BUDĚJOVICKÝ MĚŠŤANSKÝ PIVOVAR a.s., CZ.



5. Pal- and depalletisation for kegs for the Starobrno brewery

Made in 1994.

Type: Palletisation and depalletisation unit for 50 l stainless steel kegs (PD 530/540 series). The project consists of two single-column units with gripping and clamping head.

Max. throughput: 450 kegs/hour.

Present location: STAROBRNO a.s.



All machines are working proof that a Manex installation provides a longterm reliable return on your investment.

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